1160 W. Orange Grove Ave., Arcadia, California 91006, U.S.A. © Copyright 1973

A BILATERAL GYNANDROMORPH OF LIMENITIS WEIDEMEYERII LATIFASCIA (NYMPHALIDAE)

EDWIN M. PERKINS and TERRY F. PERKINS

Department of Biological Sciences; and Department of Psychology University of Southern California Los Angeles, California 90007

REPORTS OF MOSAIC AND BILATERAL GYNANDROMORPHS in the Order Lepidoptera are relatively uncommon. Among the Macroheterocera, recent records are available only for the families Saturniidae (Hessel, 1964; Muller, 1966; and Manley, 1971) and Geometridae (Blanchard, 1969). In the Rhopalocera, examples have been cited in four genera: Speyeria (Grey, 1959), Colias (Emmel, 1964; Hovanitz, 1965), Lycaena (Opler, 1966) and Pieris (Shapiro, 1970). It is the intent of this article to cite the discovery of a bilateral gynandromorph of Limenitis, thus adding one more genus to the list of butterfly genera in which this unusual phenomenon is known to occur.

Captured by the junior author at Coal Creek Campground, 2.7 mi. W. of Teton Pass, Teton County, Wyoming, 7100' el., on 9 August 1972, the specimen (Fig. 1) was netted as it glided slowly along a willow-bordered creek that traverses one of the many wet meadows to be found in this mountainous setting of aspen and conifer. Upon inspection, it was determined to be a freshly-emerged example of *Limenitis weidemeyerii latifascia* (Perkins & Perkins, 1967).

Female in appearance on its right side and male-appearing on the left, the specimen's bilateral asymmetry, including its antennal length, is obvious. The radius of the right forewing is 45 mm., whereas that of the left is only 40 mm. Genitalia are predominantly female.

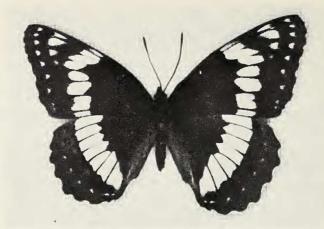


Fig. 1.—Bilateral gynandromorph of Limenitis weidemeyerii latifascia Perkins & Perkins, 2.7 mi. W. Teton Pass, Teton Co., Wyoming, 7100' el., 9-VIII-72, leg. T. F. Perkins.

As discussed by DeWilde (1964), the bilateral gynandromorphism of this specimen might be explained either by the loss of x-chromatin during the zygote's first cell division or by the occurrence of a binucleate ovum of which only one nucleus was fertilized. In either event, the resultant gynandromorph's developmental size is disproportional because the female cells are known to be larger.

The specimen has been retained in the authors' collection.

LITERATURE CITED

BLANCHARD, A., 1969. A gynandromorphic *Phaeoura mexicanaria* (Geometridae). J. Lepid Soc. 23(4): 274.

DE WILDE, J., 1964. Reproduction. In: The Physiology of Insecta. (ed. by Rockstein, M.) Academic Press, New York. vol. 1, pp. 10-53.

EMMEL, T. C., 1964. New gynandromorph of Colias philodice from Colorado. J. Res. Lepid. 3(1): 63.

GREY, L. P., 1959. Asymmetrical development in an argynnid. J. Lepid. Soc. 13(1): 14.

HESSEL, S. A., 1964. A bilateral gynandromorph of Automeris io (Saturniidae) taken at mercury vapor light in Connecticut. J. Lepid. Soc. 18(1): 27-31.

HOVANITZ, W., 1965. A Colias christina gynandromorph. J. Res. Lepid. 4(1): 41.

MANLEY, T. R., 1971. Two mosaic gynandromorphs of Automeris io (Saturniidae). J. Lepid. Soc. 25(4): 234-238.

MULLER, J., 1966. Gynandromorphic Eacles imperialis. J. Lepid. Soc. 20(2): 118.

OPLER, P. A., 1966. A gynandromorph of Lycaena gorgon. J. Res. Lepid. 5(4): 230.
PERKINS, S. F., & E. M. PERKINS, 1967. Revision of the Limenitis weide-

meyerii complex, with description of a new subspecies (Nymphalidae). J. Lepid. Soc. 21(4): 213-234.
SHAPIRO, A. M., 1970. A bilateral gynandromorph of Pieris rapae (Pieri-

dae). J. Lepid. Soc. 24(3): 224.